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MIND CHARTS:

I.—PRIMARY.

II.—MIDDLE.

III.—HIGH.

·· BY ··

ALEX. E. FRYE, LL. B.,

Author of Child and Nature; Brooks and Brook Basins;
Sand and Clay Modeling; Raised Maps
of the Continents.

OFFICE OF
SUP'T OF SCHOOLS,
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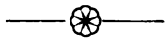
MIND CHARTS.



The end of education is power. The standard is no longer what a pupil knows, but what he can do. .

The proper way to examine a child is to teach him a new subject, and observe what activity he can bring to bear. Who, then, is better able to judge this power than the teacher who daily presents new work for his mastery?

Habit is the reflection of activity, and the kind of activity determines the quality of the habit. A pupil should always rank with his equals in power, in order that he may be held to work at the top of effort, and thus give his habits the best possible basis.

The *right* to promotion is earned the instant he proves his POWER TO DO THE WORK OF THE GRADE NEXT HIGHER.

Many progressive teachers are striving to promote on this basis, yet a serious defect is apparent. No means has been devised to systematize the examination for power, and *to record the results.* Hence, the *general notion* that a pupil can do the work of a higher grade suffices to advance him.

Such a plan is vastly superior to that of promotion on the ground of knowledge, as shown by oral or written examinations; yet it fails to locate and strengthen the weak spots in the individual mind.

To illustrate: A child enters school, weak in form perception. The defect is not noticed. Day after day comes failure in his number lessons because he cannot visualize forms, and thus discover the relations of quantity. His reading is mechanical; no forms rise up to stimulate expression.

3417

Later, history is tried, but what a failure! No sea-girt Bunker Hill, no cloud-capped Mission Ridge, no crescent Marathon.

He turns to literature, but what to his weak vision are the beautiful vales of Cashmere, or the crystal sheet Loch Lomond?

Geography?—He sees no lordly Nile, no giant Himalayas.

Disheartened, yet striving still, he turns to geometry. But here *all* is form. Finally relief is found in leaving school, and the very doors as they close behind him seem to voice the thought of the teacher, "Stupid boy!"

Heedless teacher! Yours the fault. Five minutes' examination, when he first entered school, and his mind would have been on record—*weak in power to perceive form.* Then every energy would have been bent to strengthen that faculty. Day after day he would have been encouraged to model fruits or other forms, in clay. Week after week he would have built the beautiful hills and valleys of the school district in sand, till the world of forms stood revealed to his developed senses.

> The slender rill had strayed,
> But for the slanting stone,
> To evening's ocean, with the tangled braid
> Of foam-flecked Oregon.—*Holmes.*

Teachers know full well that the above picture is not in the slightest degree overdrawn. That boy can be found to-day in almost any school, and the chances are that in every city his name is legion.

It is to aid teachers to study the minds of their pupils, to encourage them to teach for development, to establish a basis of promotion in a record of individual power, and thus to systematize the work now being done by progressive teachers everywhere, that the writer has endeavored to crystalize in the form of a series of mind charts, what seems to him to be the strongest educational sentiment of the times, viz., to grade and promote pupils on the basis of a RECORD OF POWER TO DO WORK.

EXPLANATION OF TERMS.

Chart No. 1 is to be used in the Kindergarten, and in Grades *one*, *two*, *three* and *four*. Grade *one* is first year in school; *two*, second year, etc.

Chart No. 2 is to be used in Grades *five*, *six*, *seven* and *eight* (also *nine*, if such a Grade is counted below the High School).

Chart No. 3 is to be used in High Schools, Academies and Colleges.

It is suggested that pupils be marked on a scale of *three*. The figure 1 placed in any square will signify good; 2, fair; 3, poor.

Each brace on the chart connects two rows of squares. Fill the upper row (in each brace) during the first twelve weeks of school, and the lower row when the pupil is promoted, *or* during the last four weeks of the school year.

In filling the blanks, observe the following directions:

NAME,—of pupil. BORN,—month and year.

TEMPERAMENT. Select from the following words in *italics*, the one or more that best describes the usual mental and physical state of the pupil: *nervous*, easily excited or agitated, sensitive; *calm*, not easily swayed by passion, self-restrained; *hopeful*, inclined to look on the bright side of life, buoyant; *gloomy*, easily disheartened, sad, downcast; *active*, full of vigor and energy; *sluggish*, dull, lazy, slow of motion.

CONSTITUTION—*robust*, strong to endure, vigorous, healthy; *fair*, of ordinary health and endurance; *weak*, feeble, wanting physical strength.

SENSE DEFECTS,—*deaf; color-blind; near, far, or weak-sighted.*

MIND CHART, No. 1.

(See page 7.)

Only a few devices are suggested below to explain the meanings of the terms. It may prove helpful to recall that the true way to examine is to teach, and observe what power is brought into action; for, the device which best arouses and directs activity of mind is, for that very reason, the best means of examining the mind.

PERCEIVE, *color.* Can the pupil quickly and accurately match and sort colored objects, such as flowers, worsteds, ribbons?

IMAGE, *color.* Place a color before him for an instant, remove it and ask him to select from a large group of colored objects all that resemble the sample.

RETAIN, *color.* Show a color and ask him to bring to school *next day* an object of the same color, or to name objects seen a week or month before.

PERCEIVE, *outline.* Drawing is the best device to lead pupils to perceive outlines, and therefore the best test of the power. With the objects present, can the pupils draw outlines of leaves, flowers, brooks, clouds, etc. Note, also, how readily he learns to make the script letters.

IMAGE, *outline.* Show an object, remove it, and ask him to draw or describe its shape.

RETAIN, *outline.* Ask him to draw from memory a leaf or flower, studied a long time before.

PERCEIVE, *form.* Modeling is the best device for form study. (1.) Place a form (potato, apple, dish) where it may be both handled and seen. Let the pupil model it in clay. (2.) Model such a form by using *touch* alone; i. e., in a dark room, or with the eyes closed. (3.) Model a form that can be seen, but not touched (a hill or valley, in sand or clay),—to test light and shade perception which enables pupils to judge of form by sight.

IMAGE, *form.* Let him *handle and see* a fruit or other form. Cover the form and let him model it. Note: This power to image or visualize form is perhaps the most important element in all primary teaching.

MIND CHART, No. 1—Primary.

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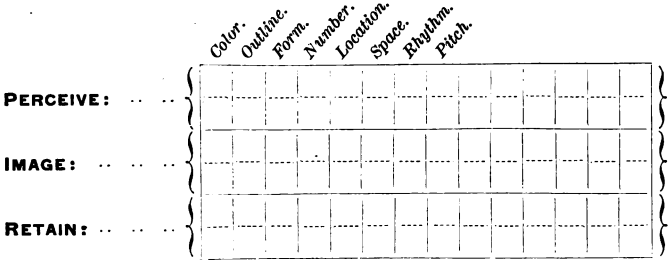
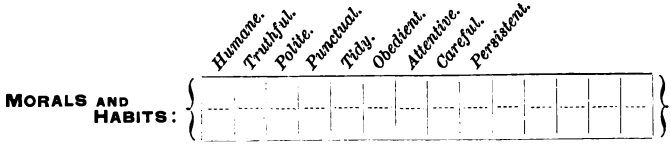
NAME..... BORN..... 18.....

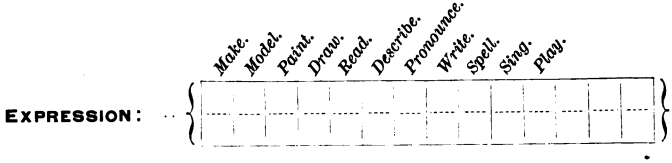
TEMPERAMENT.....

CONSTITUTION.....

SENSE DEFECTS.....







KNOWLEDGE: .. {Record of this Element of Power is made in the Course of Study.

RECOMMENDED FROM GRADE..... TO GRADE.....

TEACHER..... DATE..... 189.....

RETAIN, *form.* Model from memory objects studied a long time before.

PERCEIVE, *number.* Test the pupil's ability to perceive quickly three, four, five objects (petals, leaves, claws, sounds, dots) in all manner of grouping. Do not allow time to count by ones or twos. Sense the number instantly.

IMAGE, *number.* This will depend upon his power to image forms. Show groups of objects variously arranged; remove them and ask him to describe their positions, draw or rearrange the groups, putting the proper numbers together.

RETAIN, *number.* A week or month after giving a lesson upon plants or animals, question him as to the number of parts,—petals, sepals, ribs, teeth, etc.

PERCEIVE, *location.* Let the pupil draw an animal, tree, building, school-yard, or map of district. See if the parts are properly related as to direction and distance.

IMAGE, *location.* Direct him to look at a building, garden or flower, then turn away and draw or describe the location of the various parts.

RETAIN, *location.* Describe or draw from memory any of the above, long after they have been studied.

PERCEIVE, *space.* Look at a line of any length,—an inch, yard or rod. Let him try to draw or pace a line of the same length, with the original in sight. Try a similar experiment with a square, circle, or irregular form; then with a cubic foot, peck or cord.

IMAGE, *space.* Give the same tests as above, removing the various standards from sight, after observing them.

RETAIN, *space.* Try to draw lines showing the dimensions of objects that have not been seen for a long time.

PERCEIVE, *rhythm.* Can the pupil keep step with others to a drum or bell; can he count aloud to the regular tick of the clock; can he tap or sing in two-part measures, with regular accent (strong-weak, strong-weak); or in three-part measures (strong-weak-weak, strong-weak-weak), keeping exact time to a weight swinging on a string?

IMAGE, *rhythm.* Can he continue to do the above regularly, after the drum, bell, clock or metronome ceases?

RETAIN, *rhythm*. Does it require many drill lessons on time in marching, reading or singing, to fix the recurring accents?

PERCEIVE, *pitch*. Only *relative* pitch is to be noted. Sing or play a tone. Can the pupil repeat it accurately? Can he sing the scale correctly, after having heard it many times?

IMAGE, *pitch*. After he can sing the scale readily, can he take any given tone as *do*, and at once sing the scale based on it? If any *tone* is sounded, e. g., *fa*, can he quickly complete the scale upwards and downwards? Can he sing the various intervals from a modulator? In short, if any *tone* is sounded can he image its place with regard to the other tones of the scale? This is the basis of music reading.

RETAIN, *pitch*. Does he learn readily to sing by rote? Does he require oft-repeated drill in singing the various intervals of the scale from a modulator?

N. B.—The above tests are all to be made while actually teaching the pupil.

The day is not far distant when the work of the primary grades (first four years in school) will consist almost wholly of nature study, with modeling, drawing, describing, etc., used merely as devices to incite the mind to act upon nature, and to give direction to its activity. Then the necessity for a chart of the mind will be still more apparent.

MORALS AND HABITS. The terms of this series need no explanation. They are to be given their common meanings, e. g., *humane*, kind to animals.

EXPRESSION. A little light can be thrown on these words, as follows: *make*, to cut outlines, sew, cook, whittle, saw, etc.; *model*, in clay or sand; *paint*, with oil, water or crayon colors; *read*, to think the thoughts after an author, and to express them in the words of the text; *describe*, to express thought by oral or written language; *pronounce*, to give proper sound and accent to words; *write*, to make the letters with accuracy and speed; *spell*, to form a *habit of writing* words correctly; *sing*, look to both quality of tone and skill in reading music; *play*,—upon any musical instrument.

RECOMMENDED. The teacher recommending a pupil for any

class will fill the two lines at the bottom of the chart, and notify the Superintendent, who will issue a promotion card, as follows:

SAN BERNARDINO PUBLIC SCHOOLS.

THIS CERTIFIES THAT

.....

Is entitled to promotion from

Grade..... *to Grade*.....

..... *18*.

.....*Teacher.*

.....*Supt. of Schools.*

This promotion card will also serve as a card of transfer to any school.

The receiving teacher will at once begin to fill a new blank for the pupil, based upon personal examination of power.

All Mind Charts, with blanks properly filled, are to be filed in the Superintendent's office at least one week before the end of the school year, in order that promotion cards may be issued to pupils who receive the teacher's recommendation.

MIND CHARTS, Nos. 2 and 3.

(*See pages 12 and 13.*)

These Charts introduce special studies, and indicate what faculties should receive the teacher's earnest attention. The following tests are suggested to illustrate the meaning of the terms:

PERCEIVE, *nature study; natural science.* Can the pupil use his senses to *discover* facts in the study of nature,—plants, animals, minerals, forces and forms?

IMAGINE, *nature, etc.* Aided by descriptions, can he picture mentally the natural objects of other lands and times, that are related to what he has perceived?

GENERALIZE, *nature, etc.* Can he compare and classify plants, animals, etc., basing the classification on his own observations?

REASON, *nature, etc.* Can he trace causes to effects, and effects back to causes; e. g., the relation of plants to soil, heat and water; or how soil is made?

RETAIN. This word refers throughout to the pupil's ability to remember what he has studied.

PERCEIVE, *language.* For Chart No. 2 (English): Can the pupil pronounce slowly and accurately (after the teacher sets the example) the constituent sounds of words, i. e., is he good in phonetics? Has he formed the habit of fixing in mind the spelling (written forms) of new words which he reads? Does he express himself in good language; i. e., have his ears and eyes supplied him with choice forms of expression?

For Chart No. 3 (English and foreign languages): The same tests as used above hold good for all languages.

IMAGINE, *language.* Do words spoken or written by others bring vivid pictures into his mind? Can he reproduce a story? Can the pupil compose or formulate language readily, to express original thoughts?

GENERALIZE, *language.* In Chart No. 2: What is his power to classify words and sentences according to their uses, forms or kinds? Can he paragraph correctly, from the thought basis? In Chart No. 3: What is his ability to classify words on the basis of change in form or ending? Can he classify figures of speech?

REASON, *language.* Up to the seventh Grade the pupil should *use* language to become familiar with its forms, and to gain fluency. Beginning with the seventh Grade, mark the pupil's faculty to *explain* the construction of sentences, and to *account for* the forms of the words used. In Chart No. 3: Can he give reasons for the construction of sentences, and for the use of particular forms of words?

PERCEIVE, *reading, literature.* Is the pupil quick to perceive words and groups of words so as to get the thoughts or idea-groupings? Does he readily distinguish words spelled nearly alike?

IMAGINE, *reading, etc.* Can he visualize vividly the pictures of

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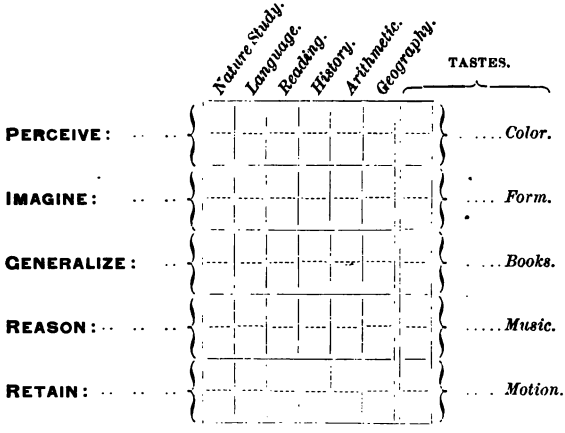
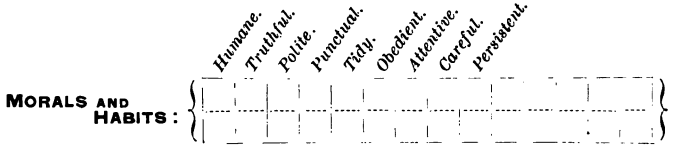
NAME..... BORN..... 18....

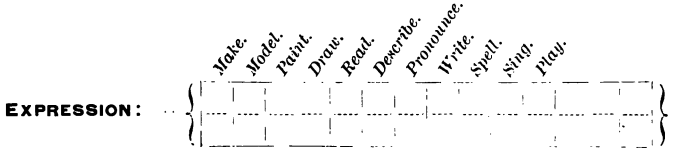
TEMPERAMENT.....

CONSTITUTION.....

SENSE DEFECTS.....







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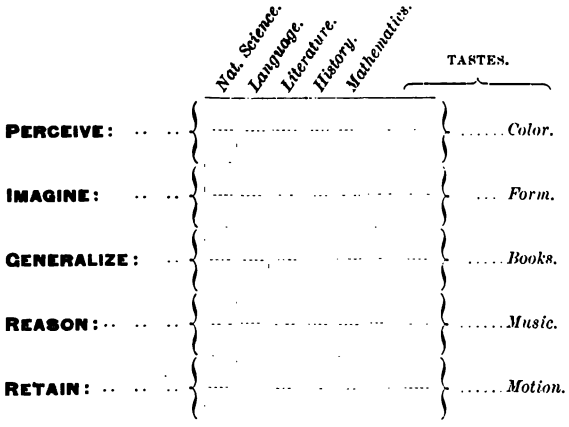
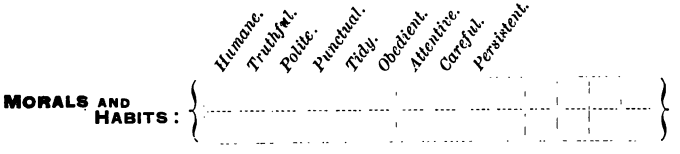
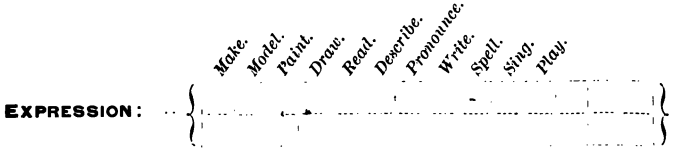
CONSTITUTION.....

SENSE DEFECTS.....







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RECOMMENDED FROM GRADE..... TO GRADE.....

TEACHER..... DATE.....189.....

the author, with no other aid than the printed page? Can he readily interpret figures of speech?

GENERALIZE, *reading, etc.* Can he classify the knowledge gained from the reading matter, e. g., in nature readings? That is, can he perceive the genus characteristics with the "mind's eye," through the text?

REASON, *reading, etc.* Can he reason with an author; i. e., follow a course of reasoning prescribed by the text?

PERCEIVE, *history.* Is the pupil observing as to important events occurring about home?

IMAGINE, *history.* Can he picture vividly historical events of which he reads or hears?

GENERALIZE, *history.* Can he group events leading to causes and effects? In Chart No. 3, history includes civics and political economy.

REASON, *history.* Does the pupil grasp the lessons of civil life which history teaches? Can he form opinions as to the cause of success or failure in historical movements?

PERCEIVE, *arithmetic, mathematics.* In Chart No. 2: Can the pupil perceive the relations of quantities to each other when presented objectively, e. g., ½ to ⅓? Also, can he readily estimate lengths, areas and volumes, with units of measure in sight? In Chart No. 3: Can he draw and model geometrical figures and forms?

IMAGINE, *arithmetic, etc.* Can he picture mentally (visualize) the conditions of problems or theorems?

GENERALIZE, *arithmetic, etc.* Can he make his own definitions and rules, by discovering processes and principles?

REASON, *arithmetic, etc.* Given the conditions, can he solve by his own effort (i. e., unaided by rules or explanations) problems that present gradually more and more difficult relations? Has he thought power?

PERCEIVE, *geography.* Can the pupil model, draw or describe the various visible features of land and water? Are the avenues of his mind open to the plants, animals, soils, forces at work wearing and building, etc?

IMAGINE, *geography.* Is his receptive imagination strong? Can he picture foreign lands of which he reads or hears? Have his

observations about home prepared him to imagine the great related forms, forces and conditions in the unseen world?

GENERALIZE, *geography.* What is his power to classify his knowledge—to discover and describe the characteristics, and thus formulate his own definitions?

REASON, *geography.* Can he draw conclusions from facts, as to causes of winds, formation of alluvial plains, basis of a city's greatness, etc?

TASTES. The brace beneath this word on the Chart incloses a single vertical row of squares to receive the marks for the five words *Color, Form, Books, Music* and *Motion.*

Taste for *Color* may be judged from the dress; ability to discriminate harmony in flowers, fruits, etc.; mixing water or oil colors; classification of objects that harmonize.

Form,—observe the beauty of form in the things drawn or modeled. Can the pupil select objects which have beautiful forms, e. g., certain trees, animals, buildings?

Books,—has he a taste for good, wholesome books, such as standard works of fiction, history, science, and travel?

Music,—has he a good ear for music? Are his favorite selections light and trashy, or do they possess merit?

Motion,—is he graceful in motion—in walking, rising, sitting, gesturing?

For explanation of MORALS and HABITS, EXPRESSION, RECOMMENDED FROM GRADE, etc., see page 9.

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